

Appendix table 3-1

Bureau of Labor Statistics projections of occupational employment: 2008–18

(Thousands)

Occupation	BLS National Employment Matrix 2008 estimate	BLS projected 2018 employment	Job openings from growth and net replacements, 2008–18	10-year growth in total employment (%)	10-year job openings as % of 2008 employment
Total, all occupations	150,932	166,206	50,929	10.1	33.7
All S&E	5,571	6,717	2,321	20.6	41.7
Computer and mathematical scientists	3,101	3,895	1,353	25.6	43.6
Computer and information scientists, research	29	36	13	24.2	45.7
Computer software engineers	910	1,205	372	32.5	40.9
Computer support specialists	566	644	235	13.8	41.5
Computer systems analysts	532	640	223	20.3	41.9
Database administrators	120	145	44	20.3	36.9
Network and computer systems administrators	340	418	136	23.2	39.9
Network systems and data communications analysts	292	448	208	53.4	71.3
All other computer specialists	209	237	73	13.1	34.7
Mathematicians	3	4	2	24.1	51.7
Operations research analysts	63	77	32	22.1	51.1
Statisticians	23	26	10	12.8	42.5
Miscellaneous mathematical science occupations	8	9	4	16.7	46.2
Mathematical scientists, all other	7	8	3	18.2	47.0
Engineers	1,572	1,750	531	11.3	33.8
Aerospace engineers	72	79	22	10.3	31.1
Agricultural engineers	3	3	1	11.1	33.3
Biomedical engineers	16	28	15	72.5	93.1
Chemical engineers	32	31	8	-1.9	24.6
Civil engineers	278	346	115	24.3	41.2
Computer hardware engineers	75	78	24	3.7	31.5
Electrical and electronics engineers	302	305	72	1.0	24.0
Electrical engineers	158	161	39	1.7	24.7
Electronics engineers, except computer	144	144	33	0.3	23.2
Environmental engineers	54	71	28	30.6	51.4
Industrial engineers, including health and safety	240	274	95	13.8	39.4
Health and safety engineers, except mining safety engineers and inspectors	26	28	9	10.1	35.8
Industrial engineers	215	245	85	14.2	39.8
Marine engineers and naval architects	9	9	2	5.9	27.1
Materials engineers	24	27	8	9.4	33.2
Mechanical engineers	239	253	76	6.0	31.7
Mining and geological engineers, including mining safety engineers	7	8	3	15.5	36.6
Nuclear engineers	17	19	5	11.2	32.0
Petroleum engineers	22	26	9	18.3	39.3
All other engineers	183	195	50	6.7	27.4
Life scientists	279	354	144	26.7	51.4
Agricultural and food scientists	31	36	16	15.5	50.6
Animal scientists	4	4	2	13.5	48.6
Food scientists and technologists	13	16	7	16.4	51.5
Soil and plant scientists	14	16	7	15.8	50.4
Biological scientists	91	111	49	21.0	53.1
Biochemists and biophysicists	23	32	16	37.5	69.8
Microbiologists	17	19	8	12.4	44.4
Zoologists and wildlife biologists	20	22	9	12.8	45.1
Biological scientists, all other	32	38	16	18.6	50.8
Conservation scientists and foresters	30	33	7	12.1	22.8
Conservation scientists	18	21	4	12.0	22.4
Foresters	12	13	3	12.2	22.6
Medical scientists	114	159	68	39.3	59.5
Epidemiologists	5	6	2	14.6	35.4
Medical scientists, except epidemiologists	109	154	66	40.4	60.5
All other life scientists	13	15	5	16.0	36.6
Physical scientists	276	317	123	15.1	44.6
Astronomers and physicists	17	20	8	15.8	44.4
Astronomers	2	2	1	13.3	46.7
Physicists	16	18	7	16.0	44.2

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Atmospheric and space scientists	9	11	3	14.9	35.1
Chemists and materials scientists	94	97	34	3.5	36.6
Chemists	84	86	30	2.5	35.6
Materials scientists	10	11	4	12.4	45.4
Environmental scientists and geoscientists	128	159	68	24.5	53.0
Environmental scientists and specialists, including health	86	110	48	27.8	56.3
Geoscientists, except hydrologists and geographers	34	39	15	17.6	45.8
Hydrologists	8	10	4	18.5	46.9
All other physical scientists	27	30	10	10.9	36.9
Social and related scientists	343	400	170	16.5	49.4
Economists	15	16	5	6.2	34.2
Survey researchers	23	31	13	30.3	57.3
Clinical, counseling, and school psychologists	152	169	60	11.1	39.4
Industrial-organizational psychologists	2	3	1	26.1	56.5
Psychologists, all other	16	18	7	14.5	42.8
Sociologists	5	6	2	22.4	40.8
Urban and regional planners	38	46	15	19.0	38.3
Miscellaneous social scientists and related workers	48	59	35	22.1	72.2
Anthropologists and archeologists	6	7	5	27.6	77.6
Geographers	1	2	1	23.1	76.9
Political scientists	4	5	3	19.5	68.3
Social scientists and related workers, all other	33	40	24	22.6	72.6
Selected other occupations					
Science and engineering managers	522	589	166	13.0	31.8
Computer and information systems managers	293	343	97	16.9	33.1
Engineering managers	184	195	49	6.1	26.5
Natural sciences managers	45	52	20	15.5	45.1
Science and engineering technicians	855	925	298	8.2	34.9
Agricultural and food science technicians	22	24	10	8.7	43.8
Biological technicians	80	94	42	17.6	52.7
Chemical technicians	66	66	13	-0.8	20.1
Geological and petroleum technicians	15	15	6	1.3	36.2
Nuclear technicians	6	7	3	9.4	43.8
Social science research assistants	21	25	13	17.6	60.5
Other life, physical, and social science technicians	147	171	87	16.5	59.5
Aerospace engineering and operations technicians	9	9	2	2.3	20.7
Civil engineering technicians	92	107	33	16.9	35.8
Electrical and electronic engineering technicians	164	160	31	-2.2	18.9
Electro-mechanical technicians	16	16	3	-4.9	18.9
Environmental engineering technicians	21	28	10	30.2	49.1
Industrial engineering technicians	73	77	19	6.6	25.5
Mechanical engineering technicians	46	46	9	-1.5	18.9
Engineering technicians, except drafters, all other	77	81	19	5.2	24.2
Mathematical technicians	1	1	1	8.3	41.7
Postsecondary teachers	1,699	1,956	553	15.1	32.5
Healthcare practitioners and technical occupations	7,491	9,091	3,139	21.4	41.9
Health diagnosing and treating practitioners	4,630	5,646	1,866	21.9	40.3
Chiropractors	49	59	18	19.6	37.1
Dentists	142	164	62	15.6	43.3
Dentists, general	120	139	52	15.3	43.1
Oral and maxillofacial surgeons	7	8	3	14.9	43.3
Orthodontists	8	9	4	19.5	46.8
Prosthodontists	1	1	0	20.0	60.0
Dentists, all other specialists	7	8	3	14.5	42.0
Dietitians and nutritionists	60	66	26	9.3	42.6
Optometrists	35	43	20	24.4	57.8
Pharmacists	270	316	106	17.0	39.2
Physicians and surgeons	661	806	261	21.8	39.4

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Physician assistants	75	104	43	39.0	57.2
Podiatrists	12	13	3	9.0	26.2
Registered nurses	2,619	3,200	1,039	22.2	39.7
Therapists	599	740	244	23.7	40.8
Audiologists	13	16	6	25.0	45.3
Occupational therapists	105	131	46	25.7	43.8
Physical therapists	186	242	79	30.3	42.4
Radiation therapists	15	19	7	27.0	45.4
Recreational therapists	23	27	12	14.6	49.8
Respiratory therapists	106	128	41	20.9	39.1
Speech-language pathologists	119	141	44	18.5	36.7
Therapists, all other	32	36	10	11.5	31.7
Veterinarians	60	79	30	33.0	50.6
Health diagnosing and treating practitioners, all other	49	55	15	13.1	31.2
Health technologists and technicians	2,719	3,280	1,202	20.6	44.2
Clinical laboratory technologists and technicians	328	374	108	13.9	32.9
Medical and clinical laboratory technologists	172	193	53	11.9	30.9
Medical and clinical laboratory technicians	156	181	55	16.1	35.1
Dental hygienists	174	237	98	36.1	56.5
Diagnostic related technologists and technicians	336	398	110	18.4	32.8
Cardiovascular technologists and technicians	50	61	19	24.0	38.6
Diagnostic medical sonographers	50	60	17	18.3	32.8
Nuclear medicine technologists	22	25	7	16.5	30.7
Radiologic technologists and technicians	215	252	68	17.2	31.7
Emergency medical technicians and paramedics	211	230	62	9.0	29.4
Health diagnosing and treating practitioner support technicians	596	753	308	26.4	51.6
Dietetic technicians	25	29	10	13.9	39.3
Pharmacy technicians	326	426	182	30.6	55.8
Psychiatric technicians	57	60	17	4.2	29.4
Respiratory therapy technicians	17	16	4	-1.2	25.5
Surgical technologists	92	115	46	25.4	50.6
Veterinary technologists and technicians	80	108	49	35.8	60.9
Licensed practical and licensed vocational nurses	754	909	391	20.7	51.9
Medical records and health information technicians	173	208	70	20.4	40.8
Opticians, dispensing	60	68	20	13.4	33.8
Miscellaneous health technologists and technicians	88	104	34	18.5	38.9
Orthotists and prosthetists	6	7	2	15.3	35.6
Healthcare technologists and technicians, all other	82	97	32	18.7	39.1
Other healthcare practitioners and technical occupations	142	165	71	16.4	49.8
Occupational health and safety specialists	56	62	25	11.1	44.6
Occupational health and safety technicians	11	13	5	14.7	47.7
Athletic trainers	16	22	12	36.8	70.6
Healthcare practitioners and technical workers, all other	59	68	29	15.9	49.3
Lawyers	759	858	240	13.0	31.7
Postsecondary teachers	1,699	1,956	553	15.1	32.5
Computer programmers	427	414	80	-2.9	18.8

BLS = Bureau of Labor Statistics

NOTES: Estimates of current and projected employment for 2008–18 period from BLS's National Employment Matrix. Data in matrix from Occupational Employment Statistics (OES) survey and Current Population Survey (CPS). Together, these sources cover paid workers, self-employed workers, and unpaid family workers in all industries, agriculture, and private households. Because derived from multiple sources, data can often differ from employment data provided by OES, CPS, or other employment surveys alone. BLS does not make projections for S&E occupations as a group; numbers in table based on sum of BLS projections in occupations that National Science Foundation considers S&E.

SOURCE: BLS, Office of Occupational Statistics and Employment Projections, National Industry-Occupation Employment Projections, 2008–18 (2009).